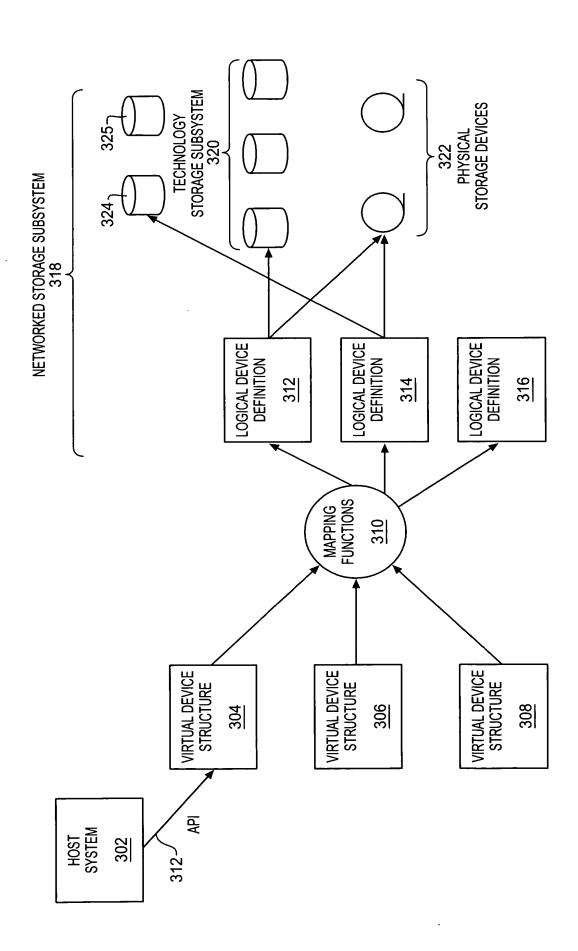


FIG. 2

FIG. 3



RAID STRIPE GROUP B

DATA - RECORDS n_{k+1} THROUGH n_x; RECORDS ...

DATA - RECORDS n_{x+1} THROUGH n_y; RECORDS ...

RAID STRIPE GROUP A

~ 402

DATA - RECORDS $n_{\rm j}$ THROUGH $n_{\rm k}$; RECORDS $n_{\rm y+1}$ THROUGH $n_{\rm z}$

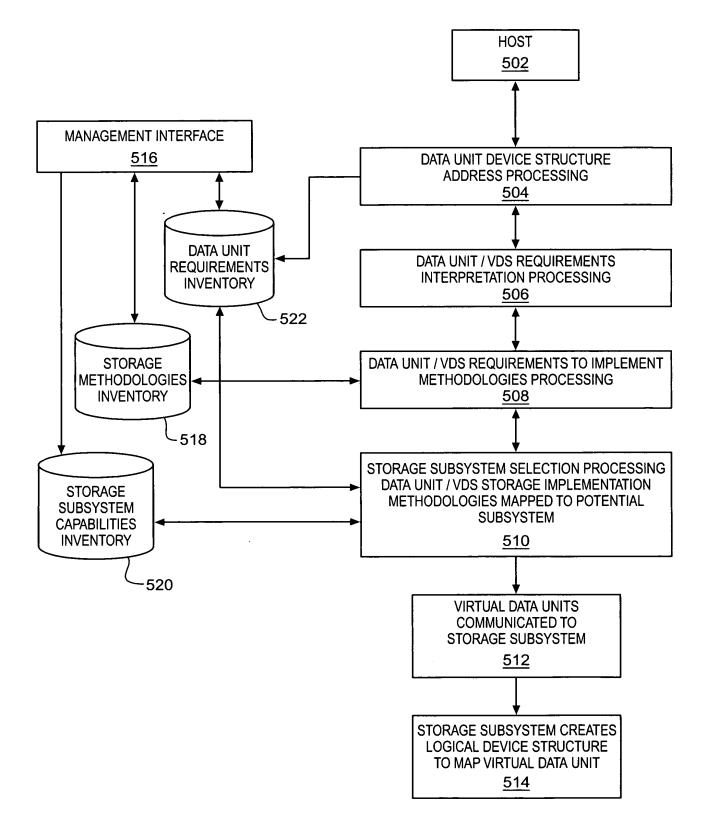
-404

- 406

RAID STRIPE GROUP C



FIG. 5





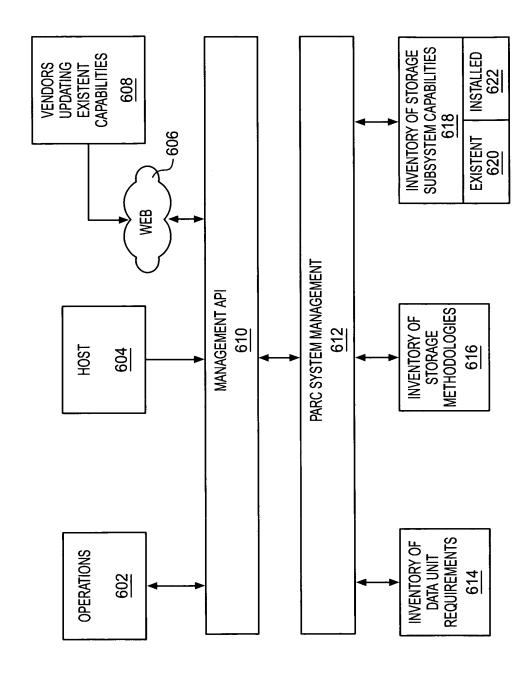
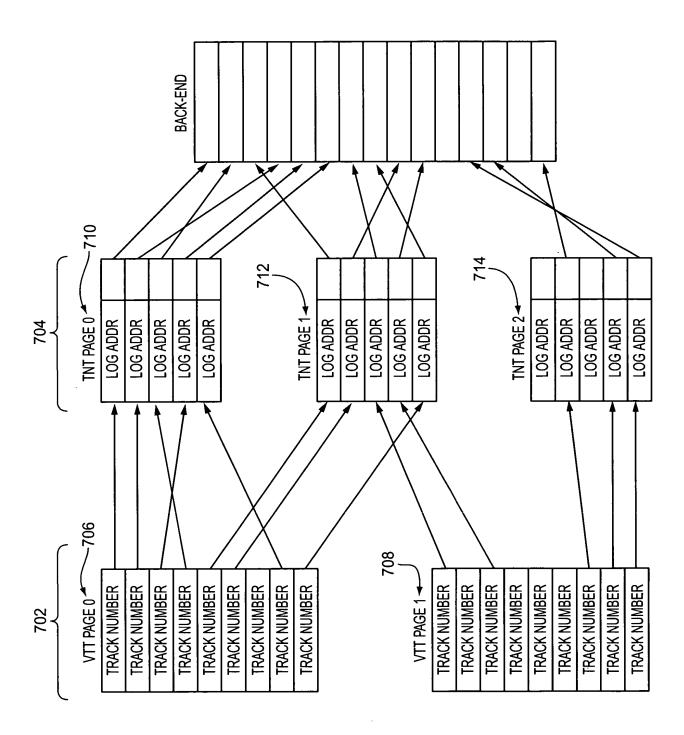




FIG. 7



RADEMARY

FIG. 8



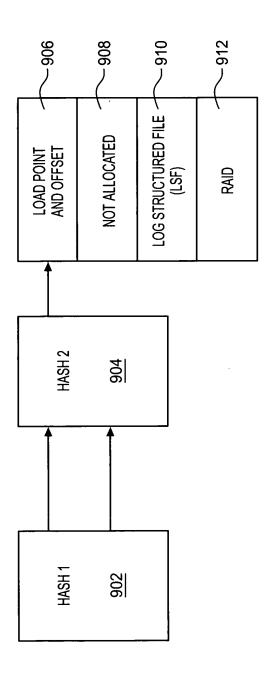


FIG. 9

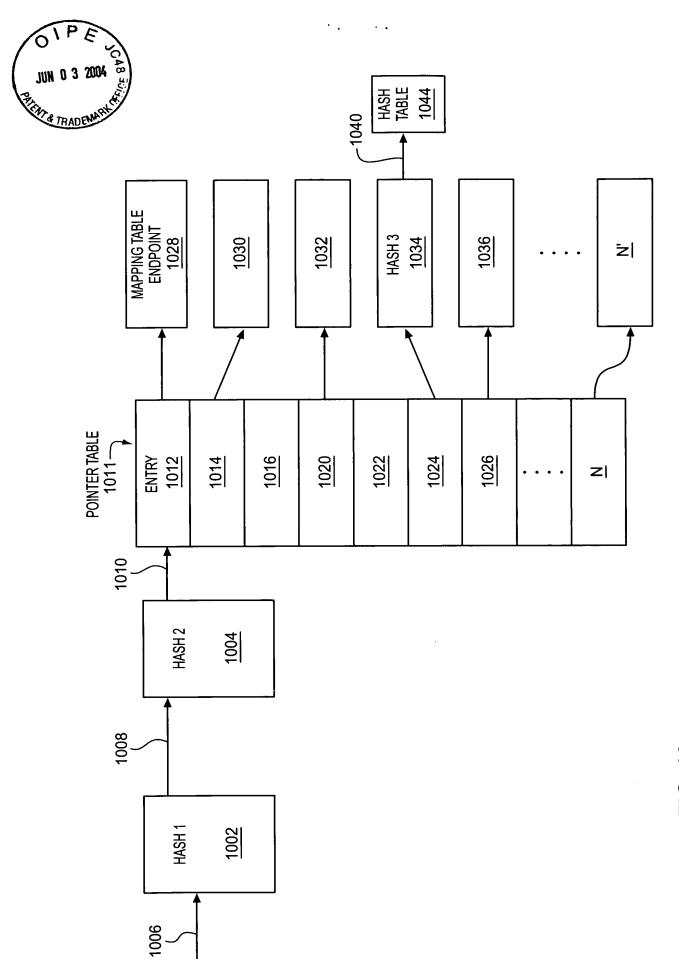


FIG. 10



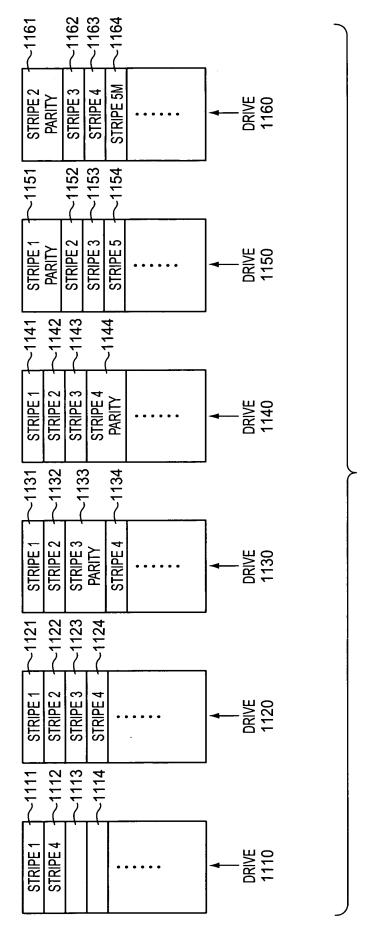


FIG. 11

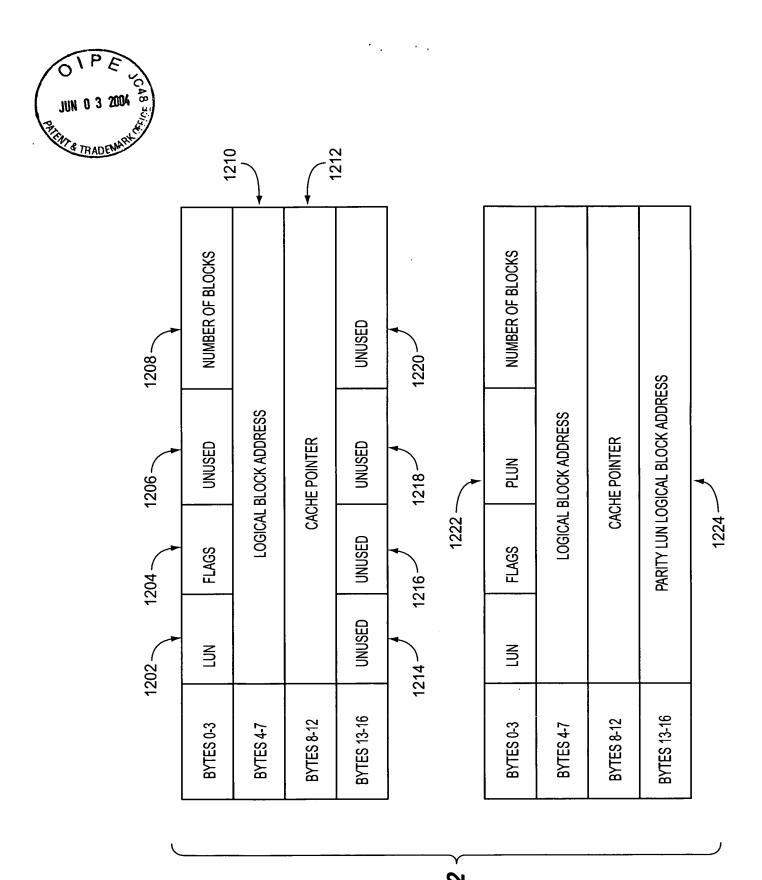


FIG. 12 -



FIG. 13

	TIMES	TIMESTAMP		
	LBA OF PREV	LBA OF PREVIOUS STRIPE		
PREVIOUS STRIPE LUN	INDEX OF PARITY DRIVE	RAID TYPE OF STRIPE	# OF STR	# OF STRIPS IN STRIP
STRIP SIZE IN BLOCKS				
1st LUN IN STRIPE	ACTIVE COUNT	# OF HOST PIECES IN STRIP	TRIP	UNUSED
	LBA OF DATA	LBA OF DATA ON 1st LUN		
2nd LUN IN STRIPE	ACTIVE COUNT	# OF HOST PIECES IN STRIP	TRP	UNUSED
	LBA OF DATA	LBA OF DATA ON 2nd LUN		
Nth LUN IN STRIPE	ACTIVE COUNT	# OF HOST PIECES IN STRIP	TRIP	UNUSED
	LBA OF DATA	LBA OF DATA ON Nth LUN		
HOST LUN	LENGTH IN STRIP	1 LSOH	HOST LENGTH	
	SOH	HOSTLBA	:	
HOST LUN	LENGTH IN STRIP	TISOH	HOST LENGTH	
	SOH HOS	HOSTLBA		



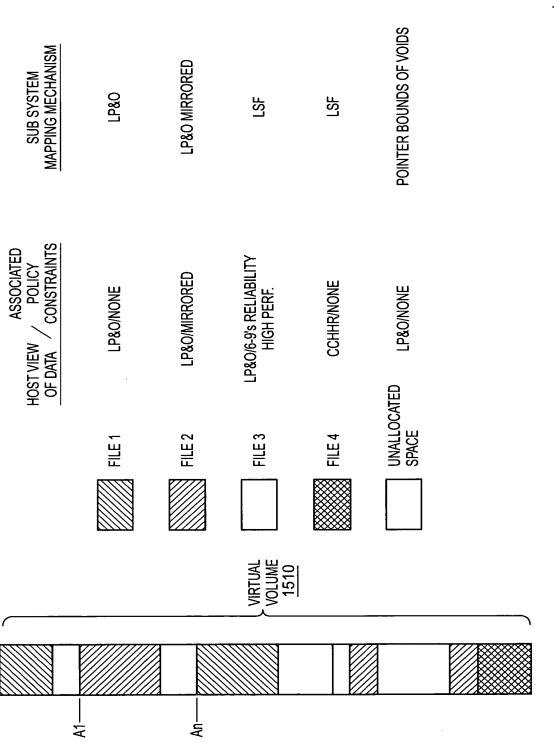
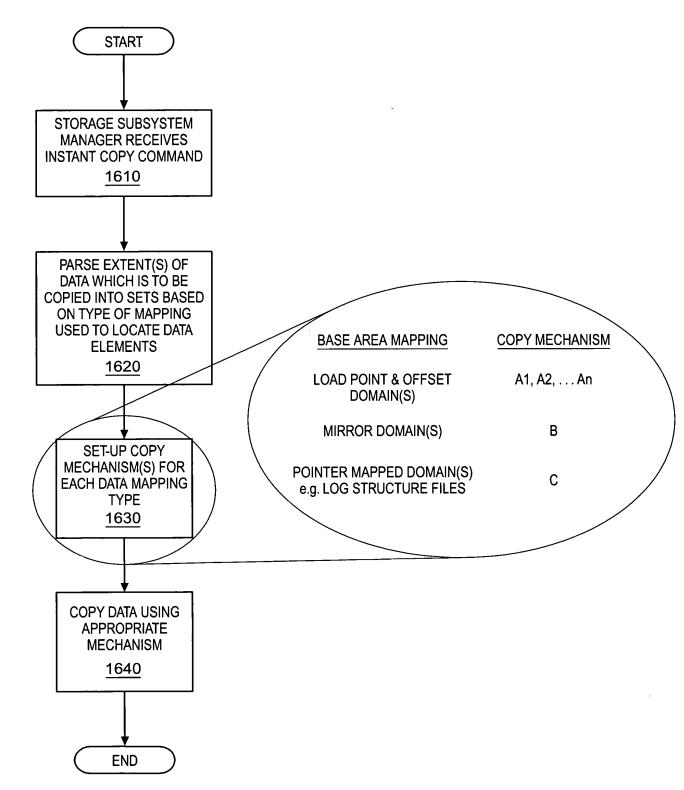




FIG. 16



INSTANT COPY META-DATA TYPE

ORIGINAL MAPPING

FULL POINTER TABLE FULL POINTER SCHEME

A2 - NEW DATA TO NEW MEMORY SPACE A1 - OLD DATA TO NEW MEMORY SPACE POINTER FOR CHANGED BLOCKS ONLY

LOAD POINT & OFFSET

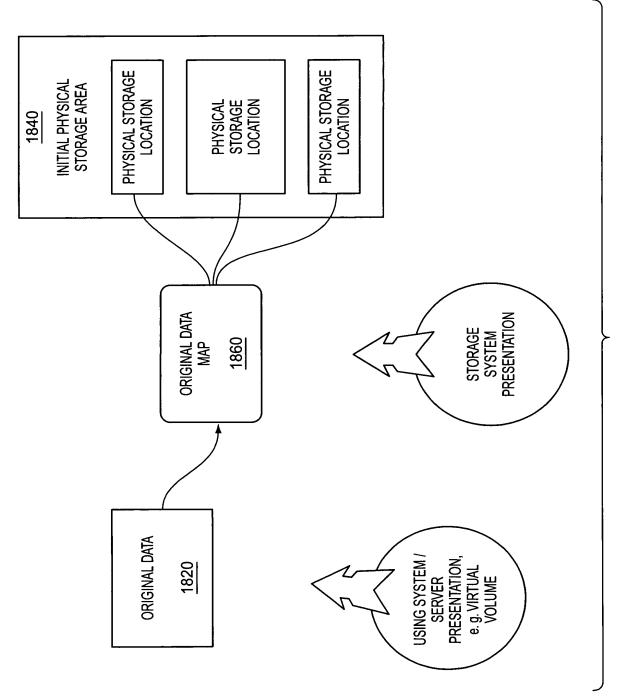
NEW DATA TO NEW MEMORY SPACE OLD DATA TO NEW MEMORY SPACE FULL BIT MAP FOR COPIED AREA

MULTI-LEVEL BIT MAPS

PARTIAL AREA BIT MAPS (WITH EXTENT DEFINITIONS & POINTERS TO PARTIAL AREAS)

FIG. 17







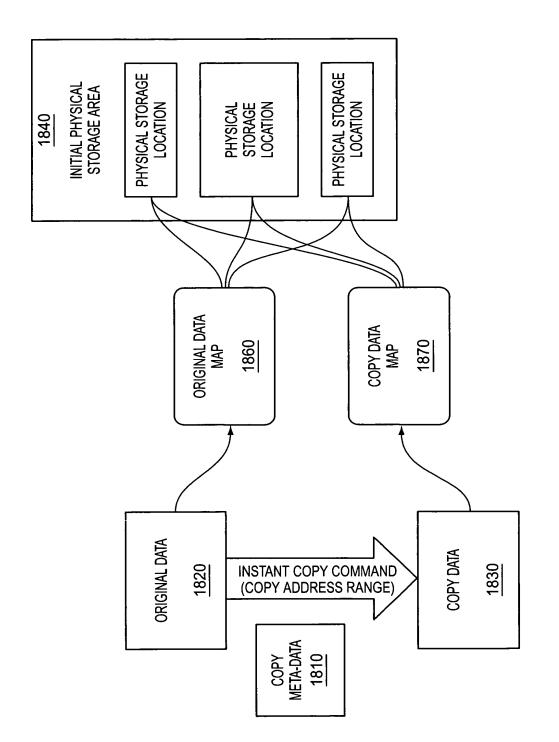


FIG. 18B PRIOR ART

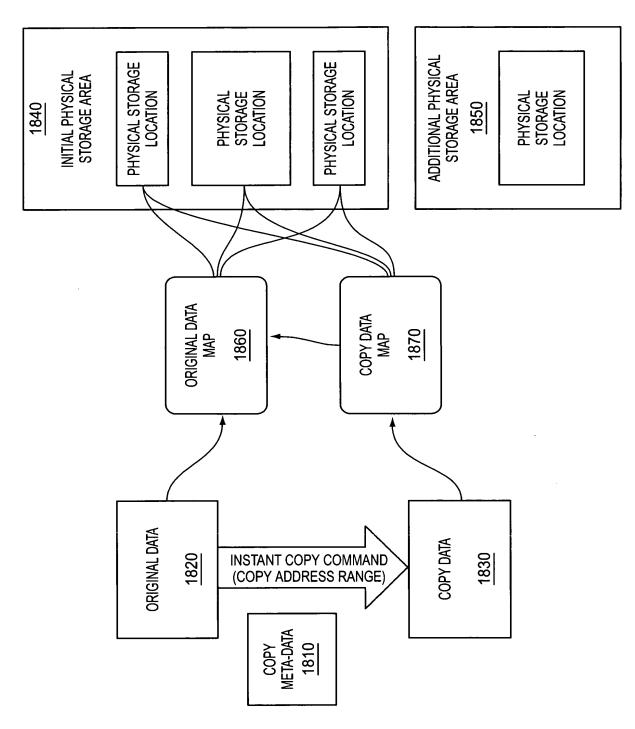


FIG. 18C

